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REMARKS/ARGUMENTS

Claims 1-19 are pending in this application.

Claims 1-6 and 10-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Admitted Prior Art (AAPA) in view of Konno (JP 5-36538) and Ikeuchi (U.S. 5,359,150). Claim 9 was rejected under 35 USC § 103(a) as being unpatentable over AAPA in view of Konno and Ikeuchi, and further in view of Iwama (JP 1-110714). Applicants note that although the Examiner listed claims 1-6 and 10-19 in the rejection over AAPA in view of Konno and Ikeuchi, it appears that the Examiner intended to include claims 1-8 and 10-19 in this rejection because each of claims 1-8 and 10-19 are specifically addressed in the body of the rejection. Applicants respectfully traverse the prior art rejections of claims 1-19.

Claim 1 recites:

“An igniter transformer comprising:

a magnetic core;

a secondary coil surrounding the magnetic core;

a primary coil; and

a plurality of round single-core wires disposed substantially parallel to one another in a common plane, the plurality of round single-core wires being bonded side by side to form a flat multicore wire that is substantially rectangular in cross-section, the secondary coil being defined by the flat multicore wire which is edgewise wound such that longer sides of the flat multicore wire face each other in the turns.” (emphasis added)

With the unique combination and arrangements of elements recited in Applicants' claim 1, including the features of “a plurality of round single-core wires disposed substantially parallel to one another in a common plane, the plurality of round single-core wires being bonded side by side to form a flat multicore wire that is substantially rectangular in cross-section, the secondary coil being defined by the flat multicore wire which is edgewise wound such that longer sides of the flat multicore wire face each other in the turns,” Applicants have been able to provide an igniter transformer in which the secondary coil can be flattened without degrading the space factor, a uniform

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insulating coating can be coated on wires of the secondary coil, and the secondary coil and the primary coil can be closely coupled so as to increase the inter-coil withstand voltage (see, for example, the first full paragraph on page 3 of the originally filed specification).

The Examiner acknowledged that AAPA fails to teach or suggest an edgewise wound secondary coil formed of a flat multi-core wire. However, the Examiner alleged that Konno teaches a transformer including at least one edgewise wound coil wound around a magnetic core, and that Ikeuchi teaches a flat multi-core wire ribbon. Thus, the Examiner concluded that it would have been obvious "to use the ribbon wire for the edgewise wound secondary coil of AAPA, as suggested by Konno, for the purpose of reducing the distribution capacity," and further, that it would have been obvious "to use the flat-multi-core wire ribbon of Ikeuchi for the edgewise wound secondary coil of AAPA, as modified, for the purpose of preventing the single-core wires from being [deformed] upon shifting or separation from each other." Applicants respectfully disagree.

First, the edgewise wound ribbon wire of Konno is used in a line filter transformer which includes only a single coil 2. Konno fails to teach or suggest anything at all about using the ribbon wire in an igniter transformer which includes a primary coil and a secondary coil, and certainly fails to teach or suggest that the ribbon wire is suitable for use as a secondary coil.

Second, the Examiner alleged that the motivation to combine the teachings of Konno with AAPA would have been to reduce the distribution capacity, which as disclosed in Konno, abates noise in the high-frequency band. Since Konno is directed to a line filter transformer, reduction of the distribution capacity and abatement of noise in the high-frequency band is very important so as not to adversely effect the filter characteristics of the line filter. In contrast, the igniter transformer of AAPA is used to ignite high intensity discharge (HID) lamps, not in conjunction with a line filter. Thus, reduction of the distribution capacity and abatement of noise in the high-frequency band

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is not a concern in AAPA because the igniter transformer of AAPA is not used in conjunction with a filter.

Prior art references in combination do not make an invention obvious unless something in the prior art references would suggest the advantage to be derived from combining their teachings. In re Sernaker, 217 USPQ 1 (Fed. Cir. 1983).

Accordingly, Applicants respectfully submit that one of ordinary skill in the igniter transformer art would not have been motivated to use the ribbon wire of Konno in the igniter transformer of AAPA.

Third, although Ikeuchi teaches a flat multi-core wire, Ikeuchi neither teaches nor suggests that the flat multi-core wire could or should be used in an igniter transformer, or that the flat multi-core wire could or should be edgewise wound. In contrast, Ikeuchi teaches that the flat multi-core wire is wound in a ribbon winding manner in which one of the larger surfaces of the flat multi-core wire is in contact with a deflection yoke core, as opposed to an edgewise manner in which an edge of the flat multi-core wire is in contact with a core (see, for example, Fig. 2 of Ikeuchi).

Fourth, the Examiner alleged that the motivation to combine the teachings of Ikeuchi with AAPA would have been to prevent the single-core wires from being deformed upon shifting or separating from each other. This is clearly incorrect.

With a single-core ribbon wire, there would have been absolutely no possibility of the single-core ribbon wire being deformed upon shifting or separating from each other. Ikeuchi discloses that when a round wire 11 is wound around the coil winding groove 5, in the manner shown in Fig. 2 of Ikeuchi, including multiple layers being wound on top of each other, the wires are susceptible to shifting and separation when pressure is applied to the multiple layers of wire because, under pressure, wires of an upper layer push down on the wires of a lower layer causing the wires of the lower layer to shift and separate from one another, as seen in Fig. 5 of Ikeuchi. In contrast, the ribbon wire of Konno is wound around the core in only a single layer. Thus, there would be absolutely no possibility of the ribbon wire of Konno separating or shifting because the

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ribbon wire of Konno is not wound so as to include multiple layers.

Accordingly, Applicants respectfully submit that one of ordinary skill in the art would not have been motivated to combine the teachings of Ikeuchi with AAPA and/or Konno.

Instead of basing the conclusion of obviousness on actual teachings or suggestions of the prior art and the knowledge of one of ordinary skill in the art at the time the invention was made, the Examiner has improperly used Applicants' own invention as a guide. It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. The Federal Circuit has previously stated that one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. In re Fritch, 972 F.2d 1260, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992).

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Konno and Ikeuchi.

The Examiner relied upon Iwama to allegedly cure deficiencies of AAPA, Konno and Ikeuchi. However, Iwama fails to teach or suggest the features of "a plurality of round single-core wires disposed substantially parallel to one another in a common plane, the plurality of round single-core wires being bonded side by side to form a flat multicore wire that is substantially rectangular in cross-section, the secondary coil being defined by the flat multicore wire which is edgewise wound such that longer sides of the flat multicore wire face each other in the turns" as recited in Applicants' claim 1. Thus, Applicants respectfully submit that Iwama fails to cure the deficiencies of AAPA, Konno and Ikeuchi described above.

Accordingly, Applicants respectfully submit that AAPA, Konno, Ikeuchi and Iwama, applied alone or in combination, fail to teach or suggest the unique combination and arrangement of features recited in Applicants' claim 1.

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In view of the foregoing remarks, Applicants respectfully submit that claim 1 are allowable. Claims 2-19 depend upon claim 1, and are therefore allowable for at least the reasons that claim 1 is allowable.

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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